Paracoccidioidomycosis granuloma simulating posterior fossa tumour

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Keywords: Paracoccidioides brasiliensis; paracoccidioidomycosis; CNS mycosis

Paracoccidioidomycosis or South American blastomycosis is a systemic mycosis caused by *Paracoccidioides brasiliensis*, a thermo-dimorphic fungus. The central nervous system (CNS) may be involved, where the fungus may produce a meningeal inflammatory reaction (basal meningitis), granulomas (pseudo-tumoral form) or even abscess formation[1-3].

In the present report the authors describe a case of neuroparacoccidioidomycosis of the cerebellum simulating a neoplastic lesion of the posterior fossa.

Case report

A 39-year-old white man was admitted complaining of progressive staggering gait, headache and tremor of the right hand for 3 months. General physical examination was normal. Neurological examination disclosed dysmetria, dysdiadochokinesia, intention tremor of the upper right limb and ataxic gait.

Routine laboratory studies including haemogram, urea, creatinine, glucose, electrolytes, alkaline phosphatase, hepatic transaminases, VDRL, were normal or negative. The erythrocyte sedimentation rate was 34 mm/h. Serological tests for *Paracoccidioides brasiliensis*: double immunodiffusion 1/16 (normal negative), precipitation test +++ (normal 0), indirect immunofluorescence 1/256 (normal 1/16). A chest X-ray showed the presence of bilateral parahilar micronodular infiltration. Computed tomography examination revealed the presence of a contrast-enhancing lesion in the cerebellar vermis and right cerebellar hemisphere (Figure 1).

Sulphametoxazol 800 mg+trimethoprim 160 mg three times daily was initiated. A posterior fossa craniotomy was performed and the tumour was totally removed. Cerebrospinal fluid obtained during the operation showed protein 181 mg%, glucose 76 mg%, 14 cells (75% mononuclear cells); bacteriological examination (Gram, Ziehl) and cultures were negative; VDRL and Weinberg reactions were negative.

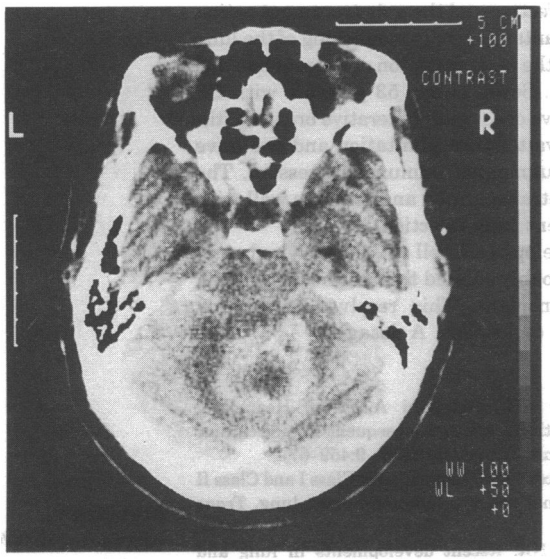

Figure 1. CT-scan examination at admission showing contrast-enhancing lesion in the cerebellar vermis and right cerebellar hemisphere.

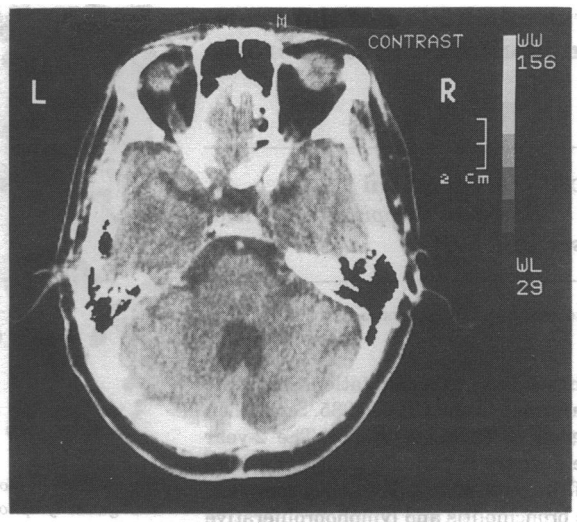

Figure 2. Postoperative CT-scan examination

Cerebrospinal fluid serological tests for *Paracoccidioides brasiliensis*: double immunodiffusion 1/1, precipitation test negative, indirect immunofluorescence 1/10. Histological study (HE and Grocot) of the removed mass were diagnostic of *Paracoccidioides brasiliensis* granuloma.

The postoperative course was satisfactory and the patient was discharged and was maintained on sulphametoxazol 800 mg+trimetoprim 160 mg twice a day. The patient was reviewed in December 1989, and was asymptomatic. At this time a computed tomography was performed and was normal (Figure 2).

Discussion

Paracoccidioidomycosis is acquired by inhalation of the conidia produced in the mycelial phase, which transforms in the yeast phase, with development of a pulmonary primary complex, akin to tuberculosis[3,4]. Subsequent haematogenous dissemination may occur and the most compromised systems are the lungs, lymph nodes and adrenal glands. The incidence of CNS involvement is variable[3-8], ranging from 1.2% (6) to 12.5% (8).

The lesions in the central nervous system are more frequently supratentorial, intraparenchymatous (single or multiple granulomas or abscess), or may involve the meninges leading to arachnoiditis[1-3,6,7]. The granulomatous form may simulate tumoral lesions[1,3]. There are several reports of cerebellar paracoccidioidomycosis, all of them simulating tumoral lesions[1,6].

Computed tomography examination is essential to evaluate the number, size and localization of the paracoccidioidal granuloma[1,5,8]. Cerebrospinal fluid examination may be normal or show nonspecific abnormalities[1,3,6]. The diagnosis may be suggested when a chest X-ray is abnormal, when there are other systemic lesions, where the fungus can be detected, and when the serological tests are positive, but the final diagnosis is histological, with the finding of the microorganism in the lesion, or mycological, with the isolation and identification of the fungus from collected biological materials[2,8].

The surgery was performed in our case to confirm the diagnosis and to remove the mass lesion. The use of sulphametoxazol-trimethoprim has been effective in the treatment of several forms of paracoccidioidomycosis, although the duration of the treatment has not yet been established[9,10].

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References

1 Araújo JC, Werneck LC, Cravo MA. South-American blastomycosis presenting as posterior fossa tumor. *J Neurosurg* 1978; **49**:425-8
2 Minguetti G, Madalozo LF. Paracoccidioidal granulomatosis of the brain. *Arch Neurol* 1983;**40**:100-2
3 Pereira WC, Raphael A, Sallum J. Lesões neurológicas na blastomicose sul-americana: Estudo anatomo-patológico de 14 casos. *Arq Neuro-Psiquiat (São Paulo)* 1965;**23**:95-112
4 Aun RA. Blastomicose do cerebelo: forma tumoral. *Arq Hosp Santa Casa S Paulo* 1957;**3**:63-70
5 Minguetti G. Tomografia computadorizada dos granulomas blastomicóticos encefálicos. *Rev Inst Med Trop São Paulo* 1983; **25**:99-107
6 Canelas HM, Lima FP, Bittencourt JMT, Araújo RP, Anghinah A. Blastomicose do sistema nervoso. *Arq Neuro-Psiquiat (São Paulo)* 1951;**9**:203-22
7 Raphael A. Localização nervosa da blastomicose sul-america na. *Arq Neuro-Psiquiat (São Paulo)* 1966;**24**:69-90
8 Hutzler RU, Brussi MLP, Capitani CM, Lima SS. Acometimento neurológico da paracoccidioidomicose avaliada pela tomografia computadorizada de crânio. *Rev Paul Med* 1985;**103**:243-4
9 Barbosa W, Vasconcelos WMP. Ação da sulfametoxazol associada ao trimetoprim na terapêutica da blastomicose sul-americana. *Rev Pat Trop* 1973;**2**:329-39
10 Guerrero CAM, Chuluc SSD, Branchini MLN. A new treatment for large cerebral paracoccidioidomycosis granuloma. *Arq Neuro-Psiquiat (São Paulo)* 1987;**45**:419-23

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Complete fracture of urethral Foley's catheter: a rare complication

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Manufacturers continuously try to improve the safety, durability and reliability of Foley's catheters. However, complications of Foley's urethral catheter owing to manufacturing deficiency are sporadically reported. Such complications include failure of the balloon to deflate or bursting and the fragments being retained in the urinary bladder[1,2].

We present a case of rare complication of Foley's urethral catheter. The catheter was completely fractured and its distal 8 cm part was retained in the urinary bladder.

Case report

A 28-year-old Indian patient was admitted to the hospital with unstable angina. Cardiac angiography revealed three stenotic coronary arteries disease. An emergency coronary bypass was performed. The patient's saphenous vein was used to utilize three grafts. Postoperatively, the patient developed cardiac tamponade and an immediate exploration revealed a small bleeding point on the surface of one of the bypass grafts. The bleeding was secured and it was decided to close the skin of the wound and to leave the sternotomy unsutured in case re-exploration was deemed necessary. A 14 Fr, silicone-coated latex Foley's urethral catheter was inserted to monitor the urine output. The catheter balloon was inflated with 10 ml of water. The patient was maintained on volume cycle ventilator.

In the first postoperative day, the patient was on the ventilator when he became restless and despite attempts to restrain him, he pulled out the endotracheal tube and the Foley's urethral catheter. The endotracheal tube was reinserted and the patient was given extra dose of diazepam. Upon inspecting the urethral catheter, its tip including the balloon part was missing. As the patient was scheduled to have delayed wiring of the sternotomy, urethrocystoscopy was performed in the same sitting. There was no disruption of the urethral mucosa. Congestion and haemorrhagic petechiae were observed over the posterior urethra and the bladder neck. The distal 8 cm of the Foley's catheter was

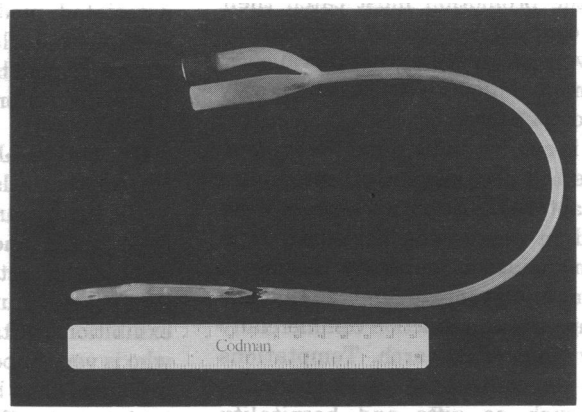

Figure 1. Broken Foley's catheter

floating at the dome of the bladder. The retained part of the catheter was removed endoscopically using the grasping forceps (Figure 1). There were few small rubber fragments in the bladder which were removed by Ellick's evacuator.

Three months later, the patient had no complaint of urological symptoms when he was reviewed in the outpatient clinic. Flowmetry demonstrated a flow rate of 18 ml/s. Ascending and descending urethrogram excluded the development of urethral stricture.

Discussion

Severe traction on the urethral catheter will lead to the constraint of its balloon and forcible removal of the catheter with potential urethral damage. In this case, the Foley's catheter fractured before the balloon was deflated, as suggested by the retaining of the distal part of the catheter.

Cracks on the surface of silicone oil coated latex urinary catheters have been demonstrated by electron microscopy examination[3]. However, complete fracture of Foley's urethral catheter, we believe, has never been reported.

References

1 Browning GG, Barr L, Horsburgh AG. Management of obstructed balloon catheters. *BMJ* 1984;**289**:89-91
2 Jorgensen A, Schouenborg L. Prolonged urologic disease caused by fragments of a balloon catheter in the bladder. *UgeskrLaeger* 1986;**148**:2409
3 Talja M, Ruutu M, Andersson LC, Alfthan O. Urinary catheter structure and testing methods in relation to tissue toxicity. *Br J Urol* 1986;**58**:443-9

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